

**IN THE CLAIMS**

Please cancel claims 2 thru 4, 6 thru 9, 12 thru 14 and 16 thru 27 without prejudice or disclaimer, amend claims 1, 5, 10, 11 and 15, and add claims 28 thru 37 as follows:

1        1. (Currently Amended) A ~~unified in-building~~ communication method in a  
2        wireless in-building communication system connected to a public land mobile network, a  
3        ~~public switched telephone network/integrated services digital network, and an Internet~~  
4        ~~protocol network including a mobile switching center and a base station controller,~~ said  
5        method comprising the steps of:

6              forming a common cell area in which a wireless public communication service and  
7        a wireless in-building communication service are available ~~in a prescribed local area~~  
8        through a private base station;

9              ~~connecting a mobile switching center to said public land mobile network;~~  
10        requesting a communication service at a mobile terminal in the common cell area;  
11        determining, in response to the requesting of the communication service, whether  
12        the mobile terminal is registered for the wireless in-building communication service;

13              ~~providing communications functions the wireless in-building communication~~  
14        ~~service to a registered mobile terminal when said registered mobile terminal is located in~~  
15        ~~said common cell area;~~ and

16              ~~not providing said communications functions to bypassing the communication~~  
17        ~~service request of an unregistered mobile terminal, and bypassing said unregistered to the~~

18      public land mobile terminal network.

Claims 2-4. (Canceled)

1            5. (Currently Amended) The method of claim 1, ~~said communications functions~~  
2    ~~including wherein the communication service includes~~ voice and data services.

Claims 6-9. (Canceled)

1            10. (Currently Amended) The method of claim 1, ~~outputting wherein~~ signals from  
2    ~~[[said]] the registered mobile terminal are outputted~~ to at least one antenna mounted in  
3    said common cell area, ~~and~~ said at least one antenna ~~[[being]] is coupled to [[said]] the~~  
4    ~~wireless in-building~~ communication system.

1            11. (Currently Amended) The method of claim 1, ~~[[said]] wherein the registered~~  
2    ~~mobile terminal communicating communicates with one selected from among of a wire~~  
3    ~~extension terminal and a wireless extension terminal, and [[said]] the registered mobile~~  
4    ~~terminal wirelessly receives performs a data service through [[said]] an Internet protocol~~  
5    ~~network.~~

Claims 12-14. (Canceled)

1           15. (Currently Amended) A unified in-building communication apparatus  
2 connected to a public land mobile network, ~~a public switched telephone~~  
3 ~~network/integrated services digital network, and an Internet protocol network;~~ said  
4 apparatus comprising:

5           ~~at least one in-building repeater~~ a private base station for forming a public/private  
6 common cell area in which [[said]] a public land mobile network service and an in-  
7 building private wireless network service are commonly used available;

8           a call manager controlling a wireless call of a registered extension mobile terminal  
9 of said in-building private wireless network, controlling operation and maintenance of  
10 radio resources, controlling private base station controller resources, and controlling  
11 registration and function setup of extension mobile subscriber corresponding to said  
12 extension mobile terminal responsive to a communication request from a mobile terminal  
13 in the common cell area for determining whether an in-building wireless network of the  
14 mobile terminal is registered, and controlling provision of a corresponding service  
15 according to a result of the determination; and

16           a public/private communication service unit being connected to said public land  
17 mobile network, said public switched telephone network/integrated services digital  
18 network, and said Internet protocol network, said public/private communication service  
19 unit performing an incoming/outgoing call from and to an office line and an extension  
20 call through an in-building private branch exchange, performing wireless communication  
21 of a registered mobile terminal in a base station under control of said call manager, and

22 performing communication of an Internet protocol terminal responsive to control by said  
23 control manager for providing the in-building wireless network service to a registered  
24 mobile terminal, and for controlling an unregistered mobile terminal for connection to the  
25 public land mobile network.

Claims 16-27. (Canceled)

1 28. (New) The method of claim 1, wherein the wireless in-building  
2 communication service provided to the registered mobile terminal includes a  
3 communication service between the registered mobile terminal and a wire extension  
4 terminal.

1 29. (New) The method of claim 1, wherein the wireless in-building  
2 communication service provided to the registered mobile terminal includes a  
3 communication service between the registered mobile terminal and a wireless extension  
4 terminal.

1 30. (New) The method of claim 1, wherein the wireless in-building  
2 communication system is connected to an Internet protocol network through a local area  
3 network.

1           31. (New) The method of claim 30, wherein the wireless in-building  
2 communication service provided to the registered mobile terminal includes a data  
3 communication service between the registered mobile terminal and an Internet protocol  
4 network.

1           32. (New) The apparatus of claim 15, wherein the public/private communication  
2 service unit comprises:

3           an Internet protocol-private branch exchange for performing switching for  
4 establishing communication between a mobile terminal in the common cell area and a  
5 wire extension terminal, and for providing a path between a wireless extension terminal  
6 and one of a public switched telephone network and an integrated service digital network;  
7 and

8           a private base station controller for allocating a vocoder in response to a call  
9 request of the mobile terminal in the common cell area, and for providing a  
10 communication path to the mobile terminal in the common cell area.

1           33. (New) The apparatus of claim 32, further comprising:

2           a router for providing access between the unified in-building communication  
3 apparatus and an Internet protocol network; and

4           a local area network switch connected to the unified in-building communication  
5 apparatus through the router for switching data of the unified in-building communication

6       apparatus, and for connecting the unified in-building communication apparatus to the  
7       Internet protocol network through a local area network.

1           34. (New) The apparatus of claim 33, further comprising a transcoder and  
2       selector bank interface for providing an interface between the local area network switch  
3       and the private base station controller.

1           35. (New) The apparatus of claim 34, wherein the private base station controller  
2       is connected to a private base station and to the public land mobile network through  
3       respective communication lines, and includes a local interface assembly for providing an  
4       interface therebetween.

1           36. (New) The apparatus of claim 35, wherein the local interface assembly  
2       generates and outputs inter-process communication data from communication data which  
3       is received from the private base station and the public land mobile network, and outputs  
4       communication data from inter-process communication data which is transmitted to the  
5       private base station and the public land mobile network.

1           37. (New) The apparatus of claim 36, further comprising a high capacity inter-  
2       process communication node board assembly connected to the local interface assembly,  
3       the transcoder and selector bank interface, and the call manger, respectively, for

4 performing inter-process communication data processing between the local interface  
5 assembly, the transcoder and selector bank interface, and the call manager.